

THE LAW CONCERNING  
INSECTICIDES AND FUNGICIDES AND  
REGULATIONS PERTAINING THERETO



The Connecticut  
Agricultural Experiment Station  
New Haven

# THE LAW CONCERNING INSECTICIDES AND FUNGICIDES AND REGULATIONS PERTAINING THERETO

**T**HIS circular supersedes Circular 162, dated October, 1945. It quotes the law in this State concerning insecticides and fungicides, and states the rules and regulations that have been adopted for carrying out the provisions of the act.

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## TEXT OF THE LAW

(General Statutes of Connecticut, Revision of 1949, and 1951 Supplement)

### CHAPTER 191. INSECTICIDES AND FUNGICIDES

**Sec. 3999. Definitions.** The term "insecticide" shall include any substance or mixture of substances intended to destroy or repel insects. The term "Paris green" shall include the product commercially known as Paris green and chemically known as aceto-arsenite of copper. The term "lead arsenate" shall include the products commercially known as lead arsenate consisting chemically of products derived from arsenic acid ( $H_3AsO_4$ ) by replacing one or more hydrogen atoms by lead. The term "fungicide" shall include any substance or mixture of substances intended to lessen the growth of or destroy fungi.

**Sec. 4000. Adulterated, when.** Paris green shall be deemed adulterated: (a) When it shall not contain at least fifty per centum of arsenious oxide ( $As_2O_3$ ); (b) when it shall contain arsenic in water-soluble forms equivalent to more than three and one-half per centum arsenious oxide ( $As_2O_3$ ); or (c) when any substance shall have been mixed and packed with it so as to reduce, lower or injuriously affect its quality or strength. Lead arsenate, not dry or powdered, shall be

deemed adulterated: (a) When it shall contain more than fifty per centum of water; (b) when it shall contain total arsenic equivalent to less than twelve and one-half per centum arsenic oxide ( $\text{As}_2\text{O}_5$ ); (c) when it shall contain arsenic in water-soluble forms equivalent to more than seventy-five one-hundredths per centum arsenic oxide ( $\text{As}_2\text{O}_5$ ); or (d) when any substance shall have been mixed and packed with it so as to reduce, lower or injuriously affect its quality or strength; provided lead arsenate and water shall not be deemed to be adulterated when such mixture shall contain more than fifty per centum of water if such mixture shall be labeled lead arsenate and water and the percentage of water shall be plainly and correctly stated on the label. Dry or powdered lead arsenate shall be deemed adulterated when it shall contain total arsenic equivalent to less than twenty-five per centum of arsenic oxide ( $\text{As}_2\text{O}_5$ ) and arsenic in water-soluble forms equivalent to more than one and one-half per centum of arsenic oxide ( $\text{As}_2\text{O}_5$ ). Insecticides and fungicides other than Paris green and lead arsenate shall be deemed adulterated: (a) When the strength or purity shall fall below the standard or quality under which it shall be sold; (b) when any substance shall have been substituted wholly or in part for the article described; (c) when any valuable constituent of the article shall have been wholly or in part abstracted; or (d) when it shall be intended for use on vegetation and shall contain any substance which, although destroying or repelling insects or lessening the growth of or destroying fungi, shall be injurious to vegetation upon which it may be used.

**Sec. 4001. Misbranded, when.** The term "misbranded," as used in this chapter, shall apply to any insecticide or fungicide, or any article which shall enter into the composition of any insecticide or fungicide, the package or label of which shall bear any statement, design or device regarding such article or any ingredient or substance contained therein which shall be false or misleading in any particular, including any statement, design or device which shall be false or misleading as to the place of manufacture thereof. Any insecticide, other than Paris green or lead arsenate, and any fungicide shall be deemed misbranded: (a) When it shall contain arsenic in any of its combinations or in the elemental form and the amount of arsenic present shall not be stated on the label as the per centum of metallic arsenic; (b) when it shall contain arsenic in any of its combinations or in the elemental form and the amount of arsenic in water-soluble forms shall not be stated on the label as the per centum of metallic arsenic; (c) when it shall consist partially or completely of any inert ingredient which shall not destroy or repel insects or lessen the growth of or destroy fungi and shall not have the name and percentage amount of each of such inert ingredients plainly and correctly stated on the label; provided, in lieu of naming and stating the percentage amount of each inert ingredient, the producer may, at his discretion, state plainly on the label the correct name and percentage amount of each ingredient of the insecticide or fungicide having insecticidal or fungicidal properties and make no mention of the inert ingredients except to state the total percentage thereof.

**Sec. 4002. Enforcement.** The commissioner of food and drugs and the director of the Connecticut Agricultural Experiment Station, acting jointly, shall make all necessary rules and regulations for carrying out the provisions of this chapter, such rules and regulations to conform, where possible, to the rules and regulations of the government of the United States authorized by the federal insecticide act of 1910. Upon complaint or information of a violation of any provision of this Chapter, submitted by the Connecticut Agricultural Experiment Station, said commissioner and said director shall hold a hearing thereon, giving reasonable notice and opportunity to any person accused of any violation hereof to be present and be heard. If said commissioner and said director shall be of the opinion that any person shall have committed a violation of any provision of this chapter, they shall place all evidence thereof which they shall have secured with any prosecuting authority having jurisdiction; but no person shall be penalized under the provisions of this chapter for selling or offering for sale any article of insecticide or fungicide in the original unbroken package in which it was received by him, provided he shall establish a guaranty or warranty by the wholesaler, jobber, manufacturer or other person residing in the United States, from whom any such article shall have been purchased, that such article is not adulterated or misbranded within the meaning of this chapter, which guaranty or warranty shall contain the name and address of the guarantor or warrantor, but such guarantor or warrantor shall be amenable to prosecution and penalties.

**Sec. 4003. Penalty.** Any person who manufactures, sells or offers or exposes for sale any Paris green, lead arsenate or other insecticide or any fungicide which is adulterated or misbranded, or who violates any other provision of this chapter, shall be fined not more than two hundred dollars for the first offense and not more than three hundred dollars for each subsequent offense.

**Sec. 4004. Analyses.** The Connecticut Agricultural Experiment Station or the commissioner of food and drugs, or both, or their deputies, may, upon tendering the market price thereof, take duplicate samples from any lot, parcel or package of insecticide or fungicide which may be in the possession of any person. Each such sample shall be taken in the presence of the owner or his representative, and shall be sealed and properly marked for identification. One of such samples shall be left with the person from whom taken and the other shall be retained by the official taking the same. The Connecticut Agricultural Experiment Station shall annually analyze at least one sample of each brand of insecticide or fungicide so collected and such analysis shall include determinations of the active ingredients which the article contains, with such other determinations as may be deemed advisable. Results of such analyses shall be published in the bulletins of said Connecticut Agricultural Experiment Station, with such information regarding the character, composition and use thereof as may be of interest or importance. Such bulletins shall be issued annually or at such other intervals as may be deemed advisable.

**Sec. 877b. Coloring of insecticides and fungicides.** The insecticides commonly known as standard lead arsenate, basic lead arsenate, zinc arsenite, sodium fluoride, sodium fluosilicate and barium fluosilicate shall not be sold unless they have been distinctly colored in a manner provided by regulations, consistent with public health and the prevention of accidental poisonings, issued by the commissioner of food and drugs and the director of the Connecticut Agricultural Experiment Station, acting jointly. Said commissioner and director may by regulation, after public hearing, require the coloration of any other powdered white insecticide or powdered white fungicide, if investigation shows that such action is necessary for the protection of the public health and such coloration is feasible. The commissioner may exempt any insecticide or fungicide from the requirements of this section to the extent that it is intended for a particular use or uses for which coloration will not be necessary for the protection of the public health.

**Sec. 878b. Sale of sodium fluoracetate.** The following acts and the causing thereof are prohibited: (a) The sale otherwise than to competent federal, state, county or municipal officers or experienced pest control operators, or the receipt in intrastate commerce by any persons other than such officers or pest control operators, of any sodium fluoracetate or any product containing any amount of sodium fluoracetate; (b) the use of sodium fluoracetate as a rodenticide or for any other purpose except under such conditions and at such times and places as may be established by regulations, consistent with public health and the prevention of accidental poisoning, issued by the commissioner of food and drugs, who shall have the same powers for the enforcement of this section as are granted to him under this chapter. Such pest control operators shall register, on or before July 1, 1951, and annually thereafter, with the commissioner of food and drugs at a fee of one dollar in the manner established by said commissioner. Any person who violates any provision of this section shall be fined not more than two hundred dollars for the first offense and not more than three hundred dollars for each subsequent offense.

**Sec. 889b. Crop dusting.** The state department of health may, with the written approval of the superintendent of the state board of fisheries and game, the director of the Connecticut Agricultural Experiment Station and the director of aeronautics, issue to any licensed pilot a permit to fly aircraft in pest control operations including crop dusting, spraying and dispensing of insecticides and poisons. When the area to be dusted or sprayed is marshland, the applicant for such permit shall publish notice of his intent to obtain such permit at least twice in a newspaper having a circulation in the area to be sprayed, the first of such publications to be at least two weeks before such spraying and the second to be at least one week before such spraying. In case such permit is issued, said director of aeronautics may waive any regulations made by him concerning altitude of flight and the dropping of objects from aircraft; said director of the Connecticut Agricultural Experiment Station may specify the kind and amount of such insecticides and poisons to be so used; and said

superintendent may designate areas over which no aircraft may be flown for such purposes and shall notify said director of aeronautics of such designation. Any person who operates or causes to be operated any aircraft for any such purpose without having obtained such a permit shall be fined not more than one thousand dollars or imprisoned not more than six months or both.

## REGULATIONS

(These rules and regulations conform, so far as possible, to those promulgated by the Production and Marketing Administration of the United States Department of Agriculture for the enforcement of the Federal Insecticide Act of 1910. The citation following each regulation refers to the Federal regulation which corresponds thereto.)

### REGULATION 191-1-1. TERMS DEFINED.

(a) "Package" includes the carton, box, barrel, or other receptacle into which an insecticide or fungicide, Paris green, or lead arsenate is placed for use, handling, removal, shipment, or conveyance; a single container of such article or articles or several containers packed together, including both the immediate container or the material and the box, carton, or other container (if any) in which it is enclosed or displayed.

"Unbroken package" and "original unbroken package" means the original package delivered by the shipper to the carrier at the initial point of shipment and also the unit package as ordinarily displayed on the shelves of the retail dealer or distributor.

(b) "Label" includes any legend and descriptive matter or design printed, stencilled, stamped, seared, or impressed upon the article or its container or wrapper, and also includes any circular, pamphlet, or other descriptive matter packed with or accompanying the article at any time while such article is in intrastate commerce, and such letters, circulars, pamphlets, and other descriptive matter to which reference is made, either on the label attached to the package or on the package itself, or any circular, pamphlet, or other descriptive matter accompanying the package in intrastate commerce.

(c) "Insect" means any of the numerous small invertebrate animals generally having the body more or less obviously segmented, for the most part belonging to the class Insecta, comprising six-legged, usually winged forms, as, for example, beetles, bugs, bees, flies, and to other allied classes of arthropods whose members are wingless and usually have more than six legs, as, for example, spiders, mites, ticks, centipedes, and wood lice.

(d) "Fungi" means all nonchlorophyll-bearing plants of a lower order than mosses and liverworts (i. e. nonchlorophyll-bearing thallophytes), as, for example, rusts, smuts, mildews, molds, yeasts, and bacteria. (F. R. 161.2.)

#### REGULATION 191-I-2. LABELING.

Statements on labels must conform to the following requirements:

(a) *To be in English language.*—All words, statements, and other information required by the act to appear on the label shall be in the English language.

(b) *Ingredient statement.*—The ingredient statement, where required on the labels of insecticides and fungicides, shall: (1) be placed on that part of the label of each individual package or container (also on the carton or outer container, if there is one) which is presented or displayed under customary conditions of purchase; (2) run parallel with other printed or reading matter on the label; (3) not be materially less conspicuous than any other word, statement, or information on the label; (4) be on a clear, contrasting background and not obscured by designs or vignettes, or crowded with other written, printed, or graphic matter; (5) give the specific names by which the ingredient is commonly known, other than a trade name or collective name, or, if it does not have such a name, its correct chemical name; (6) give equal prominence to the names of the ingredients where more than one is present; (7) give single values for the percentages of the ingredients and shall not use a sliding scale form of statement; and (8) show the term "Inert Ingredient" in type and position equally as conspicuous as the term "Active Ingredient" when both these terms are used.

(c) *Phenol coefficient statement.*—If a label of a disinfectant bears a phenol coefficient statement, it shall not be in a sliding scale form.

(d) *False and misleading statements.*—The use of any false or misleading statement on any part of the label or labeling, given as the statement or opinion of an expert or other person or based on such statement or opinion, shall not be justified, nor may such statement be justified by any descriptive matter explaining the use of the false or misleading statement.

Any statement on the label or labeling, either directly or indirectly implying that the product is recommended or endorsed by any agency of the Federal or State Government, is considered misleading.

(e) *When labels are required.*—Whenever, by the terms of the act, information is required to be on the label of an insecticide or fungicide, a label must be placed on the article or its container in order that the statement can be made. The omission of a label will not excuse the absence of the required statement.

(f) *Name and address of manufacturer.*—The name of the manufacturer or producer or the place of manufacture need not be given upon the label, but, if given, it must be the true name and true place. The words "Packed for . . . . .," "Distributed by . . . . .," or some equivalent phrase, shall be added to the label in case the name which appears upon the label is not that of the actual manufacturer or producer. (F. R. 161.12.)

#### REGULATION 191-I-3. COLLECTION OF SAMPLES.

Section 4004 of the General Statutes provides that duly authorized agents of The Connecticut Agricultural Experiment Station or of the Food and Drug Commissioner may take duplicate samples of any insecticide or fungicide upon tendering the market price thereof.

Such samples shall be representative of the lot or parcel sampled. In the case of bulk goods the sample shall be divided in two parts, each sealed, dated and marked for identification. In case of goods in package form, if each package be 2 pounds or less in weight or 1 quart or less in volume, two packages may be taken each sealed, dated and marked for identification. If packages are more than 2 pounds in weight or more than 1 quart in volume, a sample may be taken in whatever way is most practicable, divided into two parts, each sealed, dated, and marked for identification. In all cases one of the duplicate samples shall be delivered by the sampling agent to The Connecticut Agricultural Experiment Station for analysis and the other left with the person whose stock is sampled.

#### REGULATION 191-I-4. METHODS OF EXAMINING SAMPLES.

The methods of examining samples shall be those adopted and published by the Association of Official Agricultural Chemists (where applicable), and such other methods as may be necessary to determine whether or not the product and its labeling are in compliance with the law. These methods may include chemical, microscopical, physical, and bacteriological methods, and tests in orchard, field, garden and greenhouse, on animals, in or about premises, in cages, in the laboratory, and in such other places as may be necessary. (F. R. 161.6.)

#### REGULATION 191-I-6. COLORING OF INSECTICIDES AND FUNGICIDES.

The white insecticides and fungicides hereinafter named shall be colored in the manner outlined below, except that any such insecticide or fungicide that is intended solely for use by a textile manufacturer or commercial laundry, cleaner or dyer as a mothproofing agent, that would not be suitable for such use if colored, and that will not come into the hands of the public except when incorporated in a fabric, will not be required to be colored. The coloring agent must produce a uniformly colored product not subject to change in color beyond the minimum requirements specified in this regulation during ordinary conditions of marketing or storage, and must not cause the product to be ineffective, or result in its causing damage, when used as directed on the label.

(a) Standard lead arsenate, basic lead arsenate, calcium arsenate, magnesium arsenate, zinc arsenate, zinc arsenite and barium fluosilicate shall be colored any hue (except the yellow-reds and yellows), having a Munsell value of not more than 8 and a Munsell chroma of not less than 4, or discolored to a neutral lightness Munsell value of not over 7.

REGULATION 191-1-5. GUARANTY.

Guaranty against adulteration and misbranding. The following provisions apply to the furnishing and use of the guaranty:

(a) *To dealer.*—Any wholesaler, manufacturer, jobber, or other person residing in the United States may furnish to any person to whom he sells any insecticide, Paris green, lead or arsenate, or fungicide, a guaranty that such article is not adulterated or misbranded within the meaning of the act.

(b) *Essential wording.*—Each guaranty to afford protection shall be signed by, and shall contain the name and address of the wholesaler, manufacturer, jobber, or other person residing in the United States who sold the article and it shall be stated in the guaranty that such article or articles are not adulterated or misbranded within the meaning of the act. The guaranty shall not appear on the labels or packages.

(c) *Holder not to be prosecuted.*—No dealer in insecticides, Paris greens, lead arsenates, or fungicides will be liable to prosecution if he can establish that the articles were sold under a guaranty given in compliance with the regulations in this part. (F. R. 161.15.)

(b) Sodium fluoride and sodium fluosilicate shall be colored blue or green to a Munsell value of not more than 8 and a Munsell chroma of not less than 4, or discolored to a neutral lightness Munsell value of not over 7.

#### REGULATIONS CONCERNING THE USE OF SODIUM FLUOROACETATE (COMPOUND 1080)

**191-2-1.** Sodium Fluoroacetate (compound 1080) shall be used only in commercial, business and military establishments, on ships, and on guarded municipal dumps. It shall not be used in dwellings.

**191-2-2.** Sodium Fluoroacetate (compound 1080) shall be applied or used only by carefully instructed reliable personnel competently supervised.

**191-2-3.** Sodium Fluoroacetate (compound 1080) shall be stored in properly labeled containers.

**191-2-4.** When used for rat control purposes, sodium fluoroacetate (compound 1080) shall be warningly colored with a (Nigrosine black) dye.

**191-2-5.** Sodium Fluoroacetate (compound 1080), and prepared solutions, baits and equipment used in handling sodium fluoroacetate (compound 1080), shall be stored in a securely locked place when not in use. All keys to such place shall be retained in the possession of a trained and entirely reliable individual, who alone will be made responsible for sodium fluoroacetate (compound 1080), its storage and all operations connected with its use. Regular periodic inventories shall be made of all stocks of sodium fluoroacetate (compound 1080) and sodium fluoroacetate (compound 1080) preparations to safeguard the material from irresponsible, untrained or criminally inclined persons. All weighing, measuring and mixing equipment, stock bottles, bait containers and other accessories involved shall be labeled "Poison". Such articles for handling sodium fluoroacetate (compound 1080) shall be washed immediately after use and reserved for work with sodium fluoroacetate (compound 1080) only.

**191-2-6.** A respirator shall be worn in handling the pure dry chemical. The weighing or measuring of sodium fluoroacetate (compound 1080) powder shall be done in a place reserved for that purpose. Such space shall be protected from drafts, and, if ventilators are present, they shall be closed during operations. Under no circumstances shall sodium fluoroacetate (compound 1080) powder be weighed or measured out-of-doors or in open sheds.

**191-2-7.** Operators shall not smoke or eat while working with sodium fluoroacetate (compound 1080). Hands shall be thoroughly washed with soap and warm water and rinsed with clear water after handling, mixing or distributing sodium fluoroacetate (compound 1080) poisoned baits. Waste water from such washing shall never be thrown upon

vegetation that might be eaten by domestic animals. Placement of bait shall be restricted to spots most likely to be visited by rats. These shall be out of the way of human activity. Uncovered containers for dispensing water solutions of sodium fluoroacetate (compound 1080) shall:

- A. have a capacity of not more than  $\frac{3}{4}$  fluid ounces;
- B. have a flat base or bottom, the diameter of which is not less than three times the height of the container;
- C. be of an off-white or other non-conspicuous color;
- D. be marked in a strong contrasting color both inside and outside, with a distinctive standard legend containing "Poison-Skull and Crossbones", with or without the added designation "1080";
- E. permit no loss of liquid by penetration or seepage for a period of three days.

A bait box or bait station when used shall be of adequate construction and size and shall have within it a feeding arrangement such as a chicken feeder or watering jar or an anchored food tray. A bait box shall have a slanting top of a type to make impossible the placing of articles upon it. A bait box shall possess a means of ingress and egress for rats or mice not less in area than 2 in. by  $2\frac{1}{2}$  in. but in no event shall any part of an opening exceed  $2\frac{1}{2}$  in. in height. Such means of ingress or egress shall never be obstructed. Bait boxes shall be securely fastened in position and provision made for locking the box at all times. The bait box shall bear conspicuously the standard sodium fluoroacetate (compound 1080) legend; "Poison with Skull and Crossbones" and "1080". The bait box shall be approved by the Commissioner. Twelve (12) to fourteen (14) grams or no more than  $\frac{1}{2}$  ounce of sodium fluoroacetate (compound 1080) per gallon of water shall be the concentration. Supplies of sodium fluoroacetate (compound 1080)-poisoned water shall be stored and carried only in durable, shatter-resistant receptacles. Poisoned water shall be dispensed carefully by syringe or gravity-feed tubing or by the use of a pouring attachment on the sodium fluoroacetate (compound 1080) container, to avoid spillings. These shall never be placed above floor level. They shall be placed at intervals along runways, in concealed positions behind boxes and boards, or in specially constructed bait stations at a frequency dictated by the degree of infestation. Sodium fluoroacetate (compound 1080) in open containers shall be used only in commercial business establishments while the plants are closed or when no danger to the public is involved. A chart shall be made of the establishment, and the location of each bait marked so that it may be located and checked. Following poisoning operations, all combustible water containers shall be picked up and burned and residues of sodium fluoroacetate (compound 1080) solutions shall be excessively diluted and poured into sewers. The re-use of paper cups for old contaminated solution shall not be practiced.

**191-2-8.** No solid baits shall be used in rodent control in buildings.

**191-2-9.** Concentrations of sodium fluoroacetate (compound 1080) greater than those specified shall not be placed in use, since secondary poisoning hazards to other animals are definitely increased thereby.

**191-2-10.** In the course of collecting water containers for disposal following poisoning, these leftovers shall be handled with the same care used in distributing the usual bait, as the poison is still present and is as potent as when first exposed.

**191-2-11.** The bodies of all poisoned rats and mice shall be recovered and destroyed by complete burning or deep burial. All dry carcasses shall be included in this recovery procedure, as they may remain dangerous to pets for an indefinite period. (This procedure also favors good sanitation and reduces objectionable odors.)

**191-2-12.** Operators shall keep a detailed written record of all sodium fluoroacetate (compound 1080) received and dispensed. These shall include notes on the sites where baits are placed, the time of day and date, the amount and concentration of poisoned water, the number of individual placements in each room, the type of building or area treated and its sanitary condition, and a record of the person responsible for handling the product. A chart indicating the precise location of each placement shall be prepared, and at the close of operations every bait or container of solution shall be accounted for. The efficiency of the operation shall also be recorded.

**191-2-13.** In food handling establishments, open containers that are sometimes tipped, spilled or otherwise moved shall not be used. Instead, heavy glass castor cups or water founts shall be placed in covered bait boxes. Such bait boxes shall be placed no closer than 6 feet to foods subject to contamination. This procedure may be varied only if another practiced method precludes the contamination of food stocks. It shall be remembered that careless or uninstructed plant employees may place food stocks on sodium fluoroacetate (compound 1080) baits laid in the open, or overturn unprotected containers. Extreme caution shall be exercised in rooms where food is mixed, baked, or otherwise formulated, to avoid contamination.

**191-2-14.** Stocks of sodium fluoroacetate (compound 1080), while being used outside of the home establishment of the operator, shall not be left unattended and subject to loss or theft.

In the event of loss or theft of any quantity of sodium fluoroacetate (compound 1080), the operator shall notify the Food and Drug Commission immediately.